

1.5 PAGE

EDITION
OF THE
UNIVERSITY OF ILLINOIS
14 NOV 1914

ESTABLISHED 1848

RURAL
WORLD

Registered in
U. S. Pat. Office

OLMAN'S RURAL WORLD.

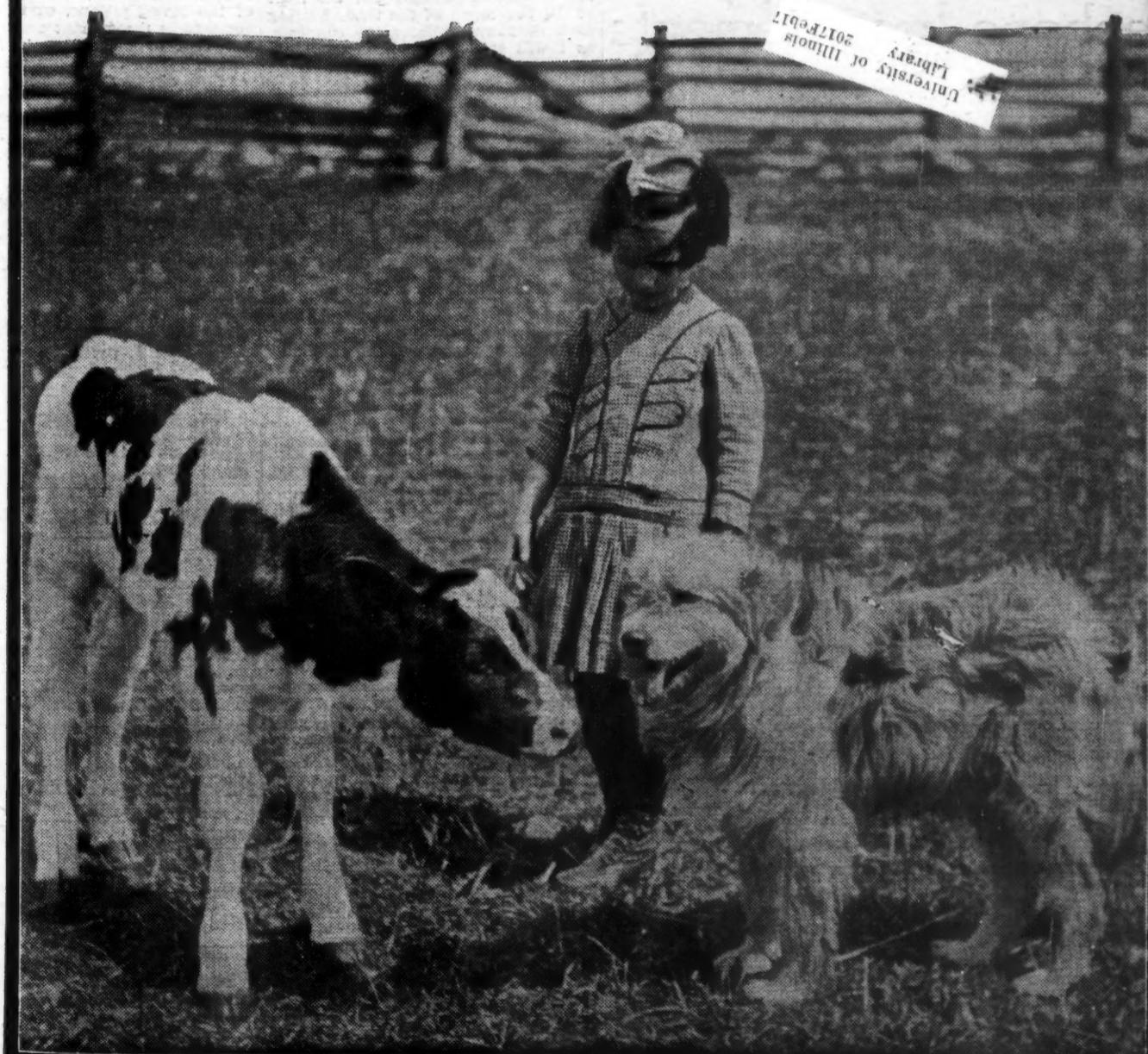
DEVOTED TO AGRICULTURE HORTICULTURE HORSES CATTLE SHEEP SWINE ETC.

OLDEST AGRICULTURAL AND LIVE STOCK JOURNAL IN THE MISSISSIPPI VALLEY

Sixty-Seventh Year.

ST. LOUIS, MO., NOVEMBER 12, 1914.

Volume LXVII. No. 46.



WHAT OUR READERS THINK & DO

CROPS AND THE WEATHER AND THE BEAUTIES OF NATURE.

Editor, Rural World:—The tardy agriculturists of our county are just finishing up wheat drilling this last week in October. If the Hessian fly would disappear forever we could then sow wheat early in September and even late in August, as I have often

seen people do during the fifties and sixties. The plants would then get tall enough so as to make fine pasture for winter. Last year my corn cribs were empty all winter, as the stock got the nubbins as fast as I could get them gathered, but this year we have large fine ears and plenty of them, although the season was very drouthy and army worms were numerous and industrious.

Commercial fertilizer is being used to some extent in the last few years, and it pays well. Cowpeas are being planted extensively in the last few years, and as a fertilizer they are taking the place of clover for enriching the soil. The clover crop is very uncertain these drouthy seasons, and much money has been lost because of poor stands, while the cowpea is sure to grow and do well. Soy beans are not raised here, but we hear that this crop is very popular in many places and more profitable than the cowpea. Let us hear from those that raise them. We hear conflicting stories about sweet clover and that it is difficult to get a stand, but all agree that it is a powerful soil renovator.

We have an alfalfa field that was sown last fall. We were obliged to prepare the ground hurriedly and with very little painstaking, but it proved a complete success. We cut three moderate crops of hay from it and the fourth one is now ready to cut, but we will leave that for a winter mulch. No inoculation was given. The ground is bottom land and well worn at that, from continual cropping. A portion was manured from the barnyard, but the yield of hay from it was not much more than that

from the part that was not manured. About the middle of the last century there was much said in the few agricultural journals that were then printed about lucerne (alfalfa) for a forage crop, and much interest was then manifested by farmers in the eastern states in regard to this plant, but in the course of a decade or two all interest upon the subject seemed to die out.

Orchards in this locality have borne large crops of big fine apples this season where the trees were sprayed, but most fruit trees of late years appear to be shortlived. After bearing a few crops they become affected with a disease that I call the "dry rot," the wood becomes brittle and doted and in light wind storms the trunks and branches will be blown down and the trees ruined. I have thought that perhaps this was the result of insect work. Will Mr. Jacob Faith or some one else enlighten us upon this subject?

We have been having cool, moist weather for some time lately, and have had almost no frost so far. Wheat and grass look fine. The trees of the forest, which are numerous here, are slow in putting on their gorgeously colored coats of red, yellow, purple and other beautiful hues that autumn frosts bring on.

The clouds above, adorn the ceiling of man's terrestrial habitation and they add to the beauty of this great fabric not made with hands. Men have attempted to paint the beauties of the evening sky when the sun goes down, according to nature, but the imitation lacks much of being equal to nature's work.

I sometimes get quite interested in watching a field of waving grain in early summertime on one of those cool windy days when dark broken clouds cover most of the sky and move rapidly overhead, shutting out the light of the sun much of the time, causing dark shadows to chase the sunspots, as I will call them, across the landscape when the solar rays force a passage through a thin place in the celestial coverlet. Dense fogs sometimes cover the fields in the states washed by the mighty waves of the ocean, when a person can see no farther away than he could amid the snowflakes of a violent Canadian blizzard.

A variety of weather is conducive to man's happiness here below, and many of us are glad when the long hot days of summer are ended, and we also grow weary of the cold wintry winds as spring approaches and vegetation bursts forth anew. Even very windy days are necessary to man's comfort, as high winds carry away vitiated air and dissipate it in space, where nature will have use for it in the growth and support of plants.—J. M. Miller, Missouri.

FROM SOUTHWESTERN MISSOURI

Editor, Rural World:—Our daughter is enjoying her first school in the rural district so much. She thinks teaching the young ideas how to shoot is great pleasure. The family with whom she boards had 80 shocks of corn washed away and 200 bushels greatly damaged by the high waters a few weeks ago. The Lynn Creek bridge washed away and several other large bridges. I had such a delightful drive going after our daughter a few weeks ago when the road on either side was a mass of beau-

tiful wild asters and goldenrods and now, since the frost, the trees are most gorgeously arrayed in every bright tint and color imaginable.

There are some young people here who have a fine bungalow home. They had a beautiful flower bed as large as a room; cannas were in the center and the tall kind of zinnias formed the greater part of the bed with nasturtiums for the last border. Can some one tell us about the color scheme in arranging flowers at church, or at home in bouquets?

We are having most beautiful autumn weather. Farmers are about through sowing wheat. Many fields already present a thrifty green appearance.

We received second premium on our wheat at Polk County Fair. At our fair this autumn the ascension of the airship was a most interesting feature. The display of large articles that can be sent by parcel post very cheaply was worthy of note. Our near neighbor had his fine hogs at the fair. They most assuredly can not be surpassed anywhere.

There have been many car loads of fine apples of all varieties shipped from here. Apples are selling from 15 to 50 cents a bushel, according to variety. We have sold very many apples and have sold \$16 worth of sweet cider; even our minister buys it to drink. Wishing all a happy Thanksgiving—Nettie Richmond, Missouri.

SERIOUS CORNSTALK DISEASE

A serious cornstalk disease that has reduced the crop on some farms in Iowa this season is under investigation by the botanical section of the Iowa Agricultural Experiment station. Dr. L. H. Pammel, who is in charge of the investigations, says that in some fields the damage amounts to 15 per cent or more, due to fallen or barren stalks or undeveloped ears.

"This disease," says Dr. Pammel, "may be recognized quite readily by fallen stalks, which look as though they had been blown over. However, there is this difference: The diseased stalks break at the nodes." A fungus parasite is responsible for the trouble. Where it attacks the stalk, there is a brownish, and sometimes pinkish, discoloration of the fibers and a little mould may also be found on the outside at the base of the leaf sheath. The roots are decayed and have a pinkish color. Such diseased stalks are often barren or have ears that are rudimentary. Sometimes the stalk may remain standing where the disease is not severe.

To help the investigation, farmers in Iowa who find evidence of this disease are urged to send specimens of affected corn plants to Dr. L. H. Pammel at Ames.

SAVE THE FODDER

All kinds of fodder should be carefully saved, that as much live stock may be wintered as the farm will carry; because this is the key-note to better farming. The corn fodder, straw, rowen and waste from the garden and orchard should all be made the best possible use of, because it all helps to feed the animals. Let nothing go to waste about the farm.

25 YEARS AGO

In Colman's Rural World—Issue of Nov. 14, 1889

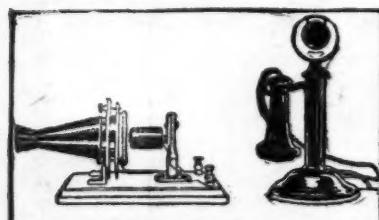
The wise farmer can always find time to read the papers devoted to his business and one reason why so many are unwise is because they will not take time to read.

After the late sale of Axtell at Terre Haute for \$105,000, the price of the trotter that may reduce the record now held by Maud S. cannot be estimated—\$100,000 have been refused for Maud S.

The Fat Stock Show is now in progress in Chicago and is, of course, the best of its kind to be seen in the country at any period of the year. Thousands of farmers if they only had the means would, we doubt not, most gladly attend, but Chicago is a place they are beginning to dread. They have been taught too many lessons there of a kind that depletes the pockets to pay it a visit unless in cases of necessity.

How the Public Profits By Telephone Improvements

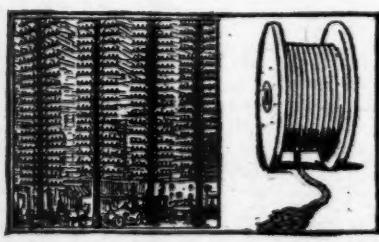
Here is a big fact in the telephone progress of this country:



Original Bell Telephone 1876 Standard Bell Telephone To-day



Early Telephone Exchange Typical Present-day Exchange



If City Wires Were Carried Overhead 800 Wires in Underground Cable

This progress in economy, as well as in service, has given the United States the Bell System with about ten times as many telephones, proportionate to the population, as in all Europe.



AMERICAN TELEPHONE AND TELEGRAPH COMPANY
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One Policy

One System

Universal Service

COLMAN'S RURAL WORLD

Vol. 67. No. 46.

ST. LOUIS, MO., NOVEMBER 12, 1914.

WEEKLY.

There's Good Money In Raising Mules

Plenty of Profit Either As a Side-Line Or As a Special Business---For Gentleness In Offspring Use Gentle Mares and Act With Kindness---It's the Details That Count.

By Russell R. Rivet, Nebraska.

THE breeding and raising of mules is worth the serious consideration of any farmer. There will always be a demand for mules; because they are such good workers. They are tough, will do more work with less feed than a horse, and are quick to learn.

The opportunities for making money from mules are excellent. Mule colts can always be sold at weaning time. A young mule can be weaned when he is seven months old. The writer saw a weanling mule sell for over \$100. It had not cost its owner a great deal of money; for the mare had picked her living during the spring and summer from land which was fit for nothing but pasture. Of course, weanlings sell as low as \$50 and \$60 in certain instances. There is always a reason for low-priced weanlings. Usually the mare that raises a young mule of poor quality has been overworked, or has not received nourishing food. When a farmer expects to make money from breeding mules he had better lay his plans before hand.

The amount of money which is necessary for a start in the mule business is slight in proportion to the probable profits which will result. If the farmer is so fortunate as to own his mares and have land upon which to raise the feed, the only expense he will be obliged to meet will be that of jack service. When there is enough breeding to be done to warrant the outlay it is a good plan for a community of farmers to purchase a jack in partnership. A jack of poor quality should never be purchased simply because he is cheap in price. A good jack costs money. Mules raised from poor breeding stock will not be nearly so profitable as the ones raised from high-class jacks and mares.

Breed from Gentle Mares.

The mares that raise the best grade mules are a cross between heavy drafters and some lighter breed, such as drivers and saddlers. The mare must be "roomy." The wise farmer raises mules from mares that have reasonably good dispositions. The mare that is kind will usually raise a gentle mule; but the "man-eating" mare is likely to produce a mule that will be the terror of the community. An example of this can be given.

One farmer owned a mare that had all the qualifications of a good brood mare, save that she was of a mean disposition. She was a biter and kicker. The farmer raised a mule from her. The mule colt was a little savage. It grew worse as it became older. Its build was all that could be desired; but few men cared to handle it. Finally one young farmer decided to tame the animal down. It kicked him soon after he purchased it. He died from the kick. Such mules are not desirable. If brood mares of the right kind are selected gentle mules can be raised.

Mares that weigh from 1,000 to 1,400 pounds make good breeding stock for mule raising. If the farmer has only one mare it will pay him to raise a mule from her. The man who has some capital say a \$1,000 or \$1,500, can make good money if he takes up the business of mule raising. Naturally a man must know how to handle animals before he can hope to succeed. His brood mares do not need to be the most expensive animals he can find. Usually the amateur mule raiser isn't particular if he doesn't raise the finest mules in the country. He probably lacks sufficient capital, and is willing to start in at the bottom and work upwards. In this case he can purchase some scrub mares. When mares of this class are bred to a high-grade jack they raise good mules. Frequently at weaning time the young mules are worth as much as their mothers. Then the mares remain ready to raise another crop. The man who knows how to feed and handle brood mares finds that mule raising offers better opportunities for money making than any of the farm endeavors. Considering the small amount of capital required to go into the business, the returns are very satisfactory. It should be remembered that a scrub mare that is well cared for and fed a nourishing ration will raise a better mule than a high-grade mare that is improperly handled.

Mules on an 80-Acre Farm.

Suppose the farmer owns an eighty-acre small farm is planned right he

can run a successful mule business. His soil will be rebuilt if he raises mules; if he grows grain crops and sold the grain, his soil would suffer. The land owner will plan his farm to suit himself; but a general outline showing how an eighty should be "laid out" for mule raising purposes can be given.

If the farmer starts out with ten brood mares, 30 acres of good grass land should furnish an abundance of feed during the pasture season. The more alfalfa upon the farm the better. Alfalfa hay is the feed which permits the mares to live through the fall, winter and early spring, and keep in good condition. It is a good plan to give the mares a forkful of alfalfa occasionally during the summer months.

The farmer can produce sufficient rough feed and grain upon his eighty to feed the animals through the winter; but some other arrangements will have to be made the following spring; for 30 acres of pasture will not be sufficient for the mules and mares. The owner should consider the matter before he decides to keep the sucklings and raise them up. Much depends upon the character of the country. If plenty of good pasture can be leased at moderate rates, it will probably pay him to keep the mules until they are large enough to break. Usually the two-year-old mule is worth twice as much as the suckling. The three-year-old mule usually sells for considerable more money than the two-year-old. If conditions are ordinarily favorable the profits made from keeping the animals will more than offset the expenses for pasture, etc.

Sucklings and Weanlings.

As a general thing the suckling mules are purchased by men who wish to speculate on them. One farmer may have a team of mares that raise a pair of suckling mules. The farmer probably has a neighbor who regards the young mules favorably. This neighbor may desire to purchase the pair and raise them for his own use; so he makes an offer. Probably the weanlings will change hands. Investigation discloses the fact that the majority of men seldom pick on a team until the animals are from a year to two years old. When a mule is two years old, his good and bad points are easily seen by the man who is an experienced mule handler.

If a farmer has some extra pasture on hand it will pay him to purchase enough young mules to fill it, providing he buys the animals right. Owing to the fact that the demand for mules is likely to increase, keeping the animals is fairly certain to result in a profit.

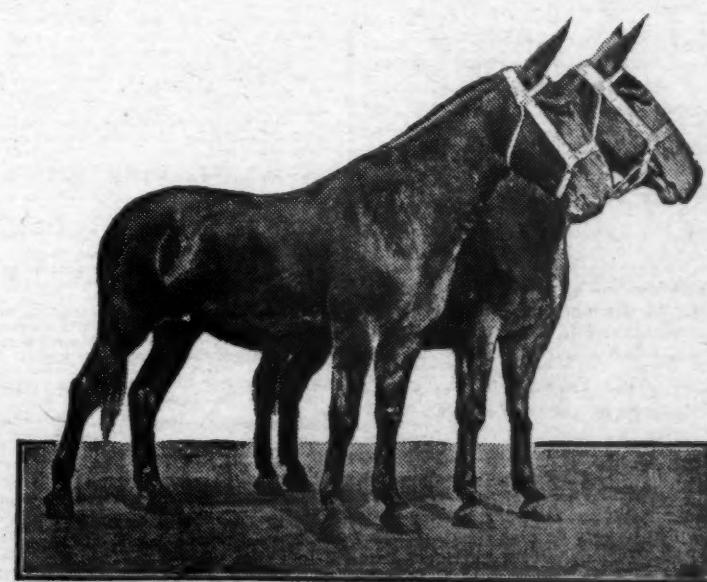
The man who owns a large, rough piece of land has a regular paradise for mule raising purposes. Owing to the fact that his supply of pasture will answer all demands, he can keep the animals until they are large enough to break, then break them and sell to a professional mule buyer, thus securing the highest market price. It is no trouble to raise enough rough feed for the herd.

Cane is one of the crops which can be grown almost anywhere, and it is excellent for mule feed. Cane should be fed to the animals early in the winter. After three or four heavy freezes it loses much of its feeding value. However, it is one of the cheapest and best feeds for use during the early winter. The writer knew two men who did little but speculate on mules. They fed alfalfa hay, millet and cane. During the first part of the winter they fed cane almost exclusively. Their mules did so well eating this feed that excellent profits were made by the speculators. Some grain was also given the animals to balance the ration.

We repeat the statement that a rough piece of land is especially adapted for mules. Cane, alfalfa, millet, etc., can be raised in patches. If the profits which result from mule raising were thoroughly understood by some men, rough pieces of land would be in great demand. Such land will pay for itself in a short time if mules are raised, and handled properly. Naturally the man who furnishes his own pasture and other feed will make the biggest profits. A little extra effort will insure plenty of roughage for winter use. When the mules are being gotten in shape for market a ration of alfalfa hay with a little grain will produce the desired results. Grass grown on a good limestone pasture will develop the young animal's bone during the spring and summer. The pastures of this nature are the best for the brood mares and growing mules.

Treat the Mules Kindly.

Many wild mules developed their undesirable natures simply because they were treated unkindly. The mule is no more wicked by nature than other domestic animals; but because he is a mule, some men treat him cruelly. Whipping the mules or "skinning" them is the favorite relaxation of some men. Naturally the mule sold at weaning time may have a varied life. One man will raise the animal and sell it to a neighbor who will run it upon grass during the summer, and feed hay,



A Team of Bay Mules, Owned in Illinois, Which Weighed 3,625 Pounds, Six Years Old.

and grain during the fall and winter. By the time the animal is large enough to be broken, some other farmer may happen along and buy it, because it will be worth more money when broken. He may break the animal, work it a while, then sell to a professional buyer. Owing to the fact that some mules are obliged to deal with a number of men, they become "ill" naturally.

As long as the mule is popular, raising him will be a profitable industry. Is there any reason why the mule will not continue to be popular? Not one. The mule is a hard worker. He will keep his temper and act like a gentleman under conditions which would put a horse out of business. Just because the mule wags his ears and is patient, is no reason why he should be starved. Feed him a nourishing ration of corn chop, bran, oats, bright hay, etc., when he is doing heavy work. Mules will take care of themselves better than horses will. Mules seldom run into barbed wire and mutilate their legs. If the wind blows the fence down and the mule escapes, he will not eat enough green stuff to kill him like a horse will. The mule knows when to stop. For all-around purposes upon the

serious consideration to the business of producing and marketing high-grade work mules will find a profitable opportunity in that direction. The long-eared, braying mule is worthy of your deepest respect.

POTASH IN THE ASHES OF COTTONSEED HULLS.

The hulls of cotton seed, according to specialists, yield ashes which contain from 18 to 30 per cent of potash and from 5 to 10 per cent of phosphoric acid. Cotton hull ashes, therefore, as a fertilizer are much more concentrated than ordinary wood ashes. As a matter of fact, in the opinion of some investigators, the ashes from cotton seed hulls contain such a large proportion of potash that they might do considerable harm to crops if they were used in large quantities.

These ashes have been used with advantage for manuring tobacco. They have in times past brought as much as \$35 or \$40 a ton in New England. One objection to the use of these ashes is their liability to vary widely in composition. This lack of uniformity is due to the fact that they are burned as fuel at the oil factories in

weather begins to come on. As the weather grows colder the dirt must be gradually heaped over the bank until it covers the top of the bank. A layer of corn stalks or such material is generally placed over the hay and then the dirt put on. This is a very simple method for the storing of the potato, and if properly done, at least 90 per cent of the potatoes will pass through the winter in good condition.

J. S. Knox, Arkansas.

from this time on, ought to be simply that of packing and keeping the road bed smooth and level.

Whenever possible, one should begin feeding from the silo as soon as it is filled. When this is done there should be no loss from spoiling.

GERMAN SILVER MESH BAG FREE

Oxidized frame, prettily embossed with hand-tooled design; 16-inch diamond Mesh Bag is all the rage, very popular. Given free for selling 20 large art and religious postcards. Send now until sold, and give us 100 postcards as a extra gift for promptness. Send name. A postcard will do.

People's Supply Co., Dept. 716 Lucas Ave., St. Louis.



A Good Average Type of Mule for Work in Town or Country.

farm the mule is unexcelled. Then he is needed wherever railroads are built, mining done, lumber is cut, etc. So we find that the demand for mules is enormous. While there may be temporary reaction in the market, due to great world-wide issues, the raising of mules should not be slighted.

The Best Type of Jack.

A word in regard to the jack. The best type of jack stands from 15 to 16 hands high. He must have good bone, plenty of style and action, and a fair length of neck. If the mule looked like its father no farmer would be seen working it; so as good a looking jack as possible should be selected.

The jack should weigh from 1,000 to 1,300 pounds. Smaller jacks also give good results. When mating a jack with a jennet use a 1,000 pound jennet with an 1,100 or 1,200 pound jack. If the jack is of high quality this mating will produce offspring that is true to type. The jennet and jack must be of good stock if they raise a good breeding animal. A high-grade jack is the most important consideration in the business of mule raising.

In most portions of this country it is possible to raise mules. All farmers, renters especially, appreciate the fact that the business results in quick returns. Great numbers of renters become land owners because of the assistance which the business of mule raising gives them. Mule raising can be carried on as a side line, or as a special business. As a side line it is also profitable. The man, whether he be land owner or renter, who gives

conjunction with wood or coal. Those lightest in color have been considered the richest in potash by certain investigators.

STORING SWEET POTATOES FOR HOME USE.

Every year there goes to waste over the state of Arkansas several thousand bushels of sweet potatoes. This loss is most generally due to the lack of proper storage conditions, and can be easily prevented provided a little care is exercised in the storing. Most of the potatoes that rot in storage do so because of excessive heat and moisture rather than because of cold.

One of the first things necessary is to have constructed a shed or house to keep off the rainfall. If the shed is used the dirt should be heaped up beneath the shed about a foot higher than the surrounding soil. This keeps the soil dry and increases the chances of the potatoes keeping. Dig the potatoes, and if the weather is not too cold, allow them to remain in the field for about 24 hours so as to dry off before being placed in storage.

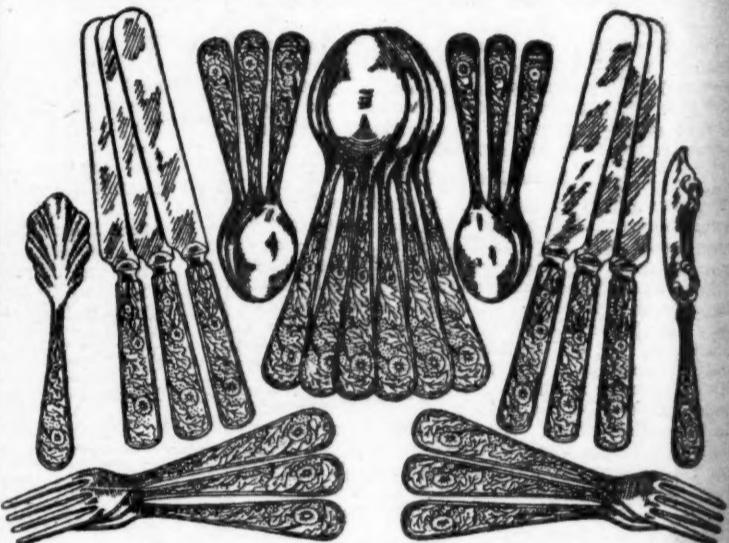
After they have been thus dried carry them to the shed and pile. A fine made of 1-inch by 6-inch lumber through which holes have been bored may be used for ventilating. If used it must, of course, be put in the center of the bank and the potatoes piled around it.

After the potatoes are thus piled they should be covered with a layer of hay or straw about six inches deep and allow to remain thus until cold

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26-Piece Electric Silver Set



We Want You to Have a Set of This Silverware

We have in the past made many fine premium offers of silverware to readers of Colman's Rural World, but this is the first time we have ever been able to offer a complete electric Silver Set on such a liberal offer. And please don't think because we are giving away this splendid set on such liberal terms that it is the ordinary cheap silverware which is plated on a brass base and consequently changes color and has that "brassy" look just as soon as the plating wears off. This set which we offer you here is plated on a white metal base, therefore each and every piece is the same color all the way through and will wear for years. As shown in the above illustration there are 26 pieces in this set—8 Knives, 6 Forks, 6 Teaspoons, 6 Tablespoons, Sugar Shell and Butter Knife. Each piece is full regulation size for family use, the handles are handsomely embossed and decorated with the beautiful Daley design which is now so popular and the blades of the knives and bowls of the teaspoons and tablespoons are perfectly plain and bright polished.

It is only because we buy this set in large quantities direct from the factory that we are able to secure it at a price that enables us to make the remarkable offer below. It is by far the greatest value we have ever offered. We will send this beautiful 26-Piece Electric Silver Set exactly as illustrated and described to any address upon the terms of the following special offer.

We have sent hundreds of these 26-Piece Electric Silver Sets to our readers, and in every case the subscriber has been delighted beyond measure. We are sure that this 26-Piece Electric Silver Set will please and satisfy you that we make this offer—and if you are dissatisfied after you get the 26-Piece Electric Silver Set, we will refund your money, or send you another set. You know we couldn't make such an offer unless this 26-Piece is exactly as we represent it.

How To Get This 26-Piece Silver Set Free

Send us a one year's new or renewal subscription to Colman's Rural World and to Farm and Home at our special price of \$1.00, and 25 cents extra to help pay postage and packing charges on the 26-piece Electric Silver Set—total \$1.25, and the complete 26-Piece Silver Set will be sent you by return mail—all charges paid. If you cannot get a new subscription to these two great papers, just send us \$1.25, and we will add a one year's subscription to your own subscription to Colman's Rural World, and in addition send you Farm and Home for one year. This offer may not appear again. Remember, for \$1.25 you get Colman's Rural World one year and Farm and Home one year, and in addition we send you the 26-Piece Electric Silver Set—all charges prepaid. Sign the coupon below today before this offer is withdrawn.

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Enclosed find \$1.25 to pay for a one year's subscription to Colman's Rural World and to Farm and Home. It is understood that you are to send me the 26-Piece Electric Silver Set—all charges to be prepaid.

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HORSE BREEDING AND RAISING

SOME MISSOURI TROTTERS AND PACERS IN THE 2:10 LIST.

Editor, Rural World:—The first 2:10 trotting stallion owned and kept in Missouri, was Serpol, 2:10, bred at Palo Alto farm, in California, sold at one of the Kentucky sales, and purchased by Alexander and Renfro, as a yearling, and by them developed to his record. After the death of Mr. Alexander he passed to George Arnold of Sedalia, who sold him to the Russians. His opportunities in the stud were very limited, but a gray colt bred by Arnold, purchased by W. F. Ervin of Sedalia, has trotted into the 2:30 list in 1914.

The first 2:10 stallion bred in Missouri, was Grattan Boy, 2:08½, bred by S. S. Brandt of Montgomery City, Mo., the only man who has ever bred two in the state. The second was Solon Grattan, 2:09½, also by Grattan, son of Wilkes Boy. Neither of them were ever used in the stud in Missouri. E. Knell of Carthage, Mo., purchased Early Reaper, 2:09½, sire of Baron Reaper, 2:09½, bred by Norman J. Colman, who refused \$10,000 for him a few days before his death. Baron Reaper is now at the head of the Colman Stock Farm, at Creve Coeur, Mo. Mr. Knell farmed Dare Devil 2:09½, that made one season, at Carthage. Henry G. Tangner purchased R. Ambush, 2:09½, and has made two seasons with him. He is probably the fastest and gamest of the 2:10 sires, used in Missouri, sired by Zolock (p), 2:05½, now owned by the Knells and the most successful living son of McKinney, for the last 20 years up to 1912, the most successful sire of 2:10 performers. Zombro, the most successful son of McKinney, made two or more seasons in Missouri.

King Hill Stock Farm purchased Cape Aubrey, 2:07½, as a yearling and developed him to his record. He has four in the list, all bred in Missouri, and is the leading son of Peter the Great, and is out of the dam of Lord Redstone, 2:06½, one of the leading young sires in Russia. At the disposal sale of King Hill stock, after the death of John Donovan, he passed to parties in Canada, where he is now owned.

The last 2:10 trotter developed and in the stud, in Missouri is Mighlition, 2:09½, purchased as a two-year-old, by Harry Downing of Marshall, Mo., and raced in Missouri and Kansas, for the last three years, took his record at the State fair in 1914. Sired by Mighty Onward, 2:22½, a brother to Horace W. Wilson, 2:19½, dam a sister to Axworthy, 2:15, one of the leading sires of the country, and the most successful son of Axtel, 2:12, and A, the dam of Mighlition, she is a Marguerette A., 2:12½. Like Mary double producer and in the great brood mare list. Their dam Marguerette, by Kentucky Prince, is the dam of six trotters, four sires and two dams. The third dam was Young Daisy, herself a great brood mare and sired by a son of Pocahontas, 2:17½, the first pacer to pace a mile to wagon in better than 2:20.

Our great sires have invariably been out of great dams. No trio of young sires, in this respect surpass the three now in use, in Missouri, all with records of 2:09½.—Baron Reaper, R. Ambush and Mighlition. All three will make great sires and will be a credit to the state in which they have found homes. In addition to string speed, all will sire a high-class of market horses. R. Ambush is siring almost as much style as our best saddle stallions, and the other two, themselves 1,200 pound horses, will sire the class of horses the government is breeding at Fort Collins, Colo.—the fast, large, American coach or carriage horse, that has no equal in this world.—L. E. Clement, Pierce City, Mo.

A BREED THAT IS WORTH MORE ATTENTION BY FARMERS.

The Suffolk Punch is a good sized horse for most farms. He has a clean leg and fetlock, like the Percheron, and is of uniform color, which is almost invariably chestnut. In docility, intelligence, agility, easy keeping qualities and willingness to work the Suffolk is unsurpassed.

Speaking of the Suffolk, Johnstone, in his "Horse Book" says:

"It is doubtful if this breed has ever received in the United States the recognition to which its many good qualities entitle it. This perhaps is accounted for in the fact that the color is not a popular one among draft horses generally and from the personal experience of the writer there has always been some sort of lurking suspicion in the public mind that these clean-legged, heavy-quartered chestnuts were French horses of some sort masquerading under a name to which they had no right. It is hard to persuade some folks that the very hairy-legged Shire and the very smooth-legged Suffolk are bred in the same island. Nevertheless the Suffolk can trace his lineage back to the middle dangers which threaten the existence

states and a ready market is found for the surplus annually, while a few are brought from England each year both by the big importers and by private individuals who have tested the breed and discovered its real merit.

"Properly speaking the Suffolk is an agricultural horse rather than a draft horse. The Suffolk is worth more extended attention by American breeders."

HORSE VS. MULE.

Commenting upon an article entitled, "Horse is now Threatened from Another Quarter," which appeared in a recent Sunday issue of the New York Herald, Mr. George E. Wentworth, writing in The Horseman, advocates the breeding of better draft and general utility horses to be extinction of the American mule. He entitles his article, "Why Use Adulterated Horses?" thereby christening this long-eared hybrid with another but longer name.

At the outset of his remarks, he says, "The object of the article," referring to that in the Herald, "is manifestly not to warn us of the



A Typical English Heavy Hunter. This Horse, Grey Man, was a Champion at the Dublin (Ireland) Horse Show.

of the eighteenth century and beyond in an absolutely unbroken line.

"Insofar as they have been given a trial here they have made good. The individuals do not run as large as the Shire and have proved themselves eminently well suited for crossing on

rather small mares, on the ranch and elsewhere. Their progeny is wonderfully uniform and they make most excellent workers. It is doubtful if there is in the entire list of draft breeds one which has a better disposition or greater tractability. In their native land it is the custom of their drivers to break these horses to work entirely without reins. In the plow, on the road, in the show ring, you may see them often hitched three tandem guided by one man and not a rein in sight.

He then proceeds to dispose of the claims and arguments that mules require less to feed than horses; that they live to greater ages; do not become unsound or sick and have greater endurance; pointing out in each instance the fallacy of the claim and finally ends up by asking, "If the mule is free from disease and unsoundness and has unusual endurance, why not mount our cavalry on mules?"

He also undertakes to show that good sound large horses can do more work than mules and that it is not true that negroes are always unfit to handle horses, giving instances where they have handled most valuable ones successfully. Among other things, Mr. Wentworth says, "The southern-born farmer is obsessed with the idea that an adulterated horse is superior to the genuine article. Unable to cope successfully with the new conditions, he has sought to remedy matters by demanding a large sized animal of the same perverted strain. To supply this demand for big mules, the best breed draft or grade mares must be withdrawn from horsebreeding. In order to get a large mule well coupled up, good breeders use a large mare with a medium-sized jack. The mule gets nothing from the jack except his thick head and a disinclination to work. A good mule must have as much horse in him as



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it is possible to obtain."

There is much of interest in what Mr. Wentworth says, but at times his ardor and emphatic statements render his remarks somewhat ludicrous. Even so, we are always glad to hear the horse praised and welcome arguments in his behalf, and while we are not prepared to go quite the length which Mr. Wentworth does in desiring the extinction of the mule—believing the hybrid has its place, taking much rough work off the horse—we do agree that it would be better if more interest were taken in breeding fine large draft and general utility horses.—Southern Sportsman.

Etawah keeps hanging up a new record about every time out. His winning The Transylvania in 2:03½, 2:03¾ and 2:03½ was indeed a most wonderful performance. And to think that he is but a four-year-old. It is understood that Frank Jones has offered to match Etawah against Peter Volo for a side bet of either \$5,000 or \$10,000.

If all horsemen realized the advantage of always keeping on the conservative side of it, in making statements about their horses' speed and claims, there would be fewer disappointments and disaffected with the business and game than there are. Nothing gets back or detracts more than extravagant assertions and pretensions which make the word of the author neither of weight, nor credence, and consigns him to the class of "wind-jammers."

CATTLE FOR BEEF AND FOR MILK

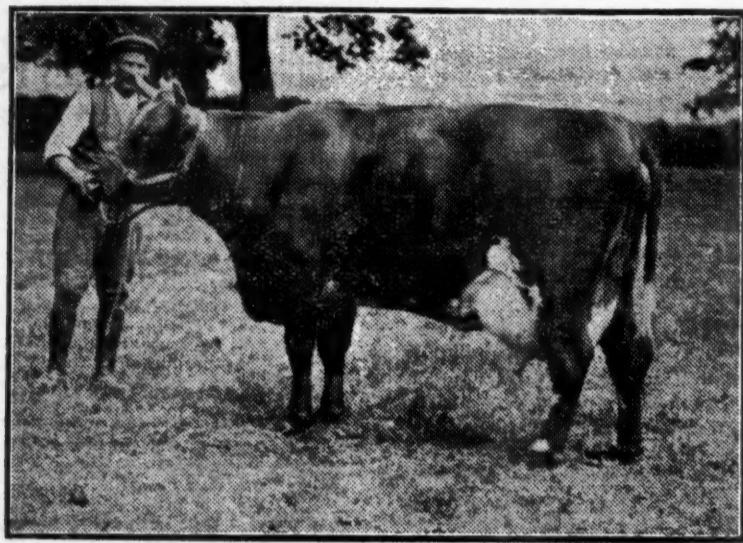
SIZING UP THE POINTS OF A DAIRY COW.

The dairy cow must be studied from the point of view of her development around four centers, (1) the milk-producing center, indicated by the development of the udder, the milk veins, and the milk wells; (2) the digestive center as found in the barrel or body of the cow; (3) the respiratory and circulatory center, located in the chest; and (4) the nervous center as manifested in development of head and back and in the general lean appearance of the animal.

In the development of these centers

ly hollow, if an animal was ailing it was thought to have "hollow horn"; or if anything was wrong with the hind quarters it was thought to be afflicted with "wolf in the tail." This notion was general years ago, and it appears that it has not entirely died out, for in a recent publication of one of the leading American farm papers a subscriber tells of boring a hole into a cow's horn and filling it with turpentine; likewise, the same man had an ailing bull and so a slit was cut in the tail and salt and pepper were put into it to cure the bull of "wolf in the tail."

These are purely imaginary diseases. The horns of nearly all horned animals are hollow and whether they are hot or cold is of little value in diagnosing a disease. The idea of these diseases is a relic of superstition based on ignorance, and anyone guilty of boring a hole into an animal's horn and filling it with turpentine or other irritant is liable to prosecution for cruelty to animals. Likewise, if the animal is sick, it will only irritate him to cut open his tail and put burning substances in the cut. It



A Fine Specimen of the Dairy Shorthorn. This Cow, Heather Queen 3rd, is a Well-known Winner at English Shows.

the tendency is for the animal to be larger in the rear half of the body, being broader and deeper than in the forequarters and a strong development in the lower half of the body. Therefore, look for the development which appears light in front and deep and broad behind. This development assures the largest capacity for the consumption and utilization of feed and for the production of milk. In order to secure this type of body there must be a large development of the udder, being carried up high behind and well forward, with a rounding out and development of all four quarters. The teats should be placed at the corners of a square on the bottom of the udder. There should be a mellowness and elasticity to the skin that covers the udder and when the udder is milked out it should not retain its shape but appear almost as folds of skin. The milk veins should be large, long, and very crooked.

In the development of the body a straight, strong back with a broad loin and ribs that are long and well sprung are desired, because they form a great roomy barrel. The pump should be long, broad, and level and more or less angular. The principal impression given by a well developed body is that of great capacity. The animal should be fairly deep down through the shoulders and broad between the front legs and just back of them, giving plenty of room for the heart and lungs. There should be a general mellowness and closeness to the skin and a lean condition of the animal. A smoothness of body secured by a tendency to put on fat while the animal is giving milk is undesirable. In connection with all these characters the cow should have an active, alert and decidedly effeminate appearance.

"HOLLOW HORN" AND "WOLF IN THE TAIL."

Years ago, before the science of medicine was known and before it became common knowledge that the horns of all horned animals are usual-

ly hollow enough to get a little salt in a raw sore, but to put in a large quantity is to aggravate a disturbance rather than help it. An intelligent person ought never to be guilty of doing the things this subscriber did.—I. J. Mathews, Michigan.

PRACTICAL POINTS ON CARE OF THE FALL CALF.

We like to have our cows freshen in the fall. The condensory pays us more for milk in the winter months, we get more milk from each cow in the course of the whole lactation period, and last, but by no means least, we can raise better calves. No spring calf is big enough or strong enough to thrive on grass the first summer. The best place for it by all means is in the stable. And we know by experience that it is precious little attention the calves generally get when there is a rush on with other work. In the winter, however, we have lots of time for chores, and the fall calves get the best of care.

At one time we raised a great many calves, and our greatest trouble was always with scours, and these in turn we attributed to the difficulty in keeping the milk pails sweet and fresh. If neglected in the least they get sour, and scours in the calf pen is the result. It is easier to keep a calf from having scours than it is to cure it once it is scoured. The easiest way to avoid scours during the milk feeding days is to have fall calves, as we all know that keeping pails sweet in cold weather is an easy matter.

Milk Feeding Rules.

We make a practice of feeding whole milk for the first 10 days. Then we gradually begin feeding skim milk, and at three weeks the whole milk has been entirely displaced. The amount of milk fed ranges from three quarts to six quarts a day for the first two weeks, and the amount is increased according to the demands of the animal. At first we feed the milk three times a day, and so important do we consider it that the temperature be uniform at all feedings, that we use a ther-

ometer, always heating the midday feeding exactly up to blood heat. Nothing will upset a calf more quickly than to feed it warm milk morning and night and cold milk in the middle of the day. The milk feeding is continued right up to six months of age, but of course before that time the calf is strong enough to take cold milk. My plan, however, is to feed the milk warm directly from the separator right to the end.

The great trouble where milk is shipped to the condensory, as in our case, is the temptation to starve the calves for the benefit of the condensory. We are getting into pure bred Holsteins, however, and are looking forward to the day when our calves will be more important financially than even the milk. Accordingly, we skim enough milk, making the cream into butter, to feed the calves liberally for the first six months. We substitute to some extent with a prepared calf meal, and find it good.

Teaching to Eat Grain.

When the calves are a couple of weeks old, we begin to drop a little grain into the bottom of the milk pails and we soon have them eating grain. The grain feeding consists of a little oil meal and a good large proportion of crushed oats. In fact, oats are our standby for all growing stock.

An objection that we have frequently heard to fall calves is that warm enough quarters cannot be provided for them on the average farm. Our belief is that the calves do not require as warm quarters as do the men who wait on them. Our calf barn is not as warm as the cow barn but the calves never experience any discomfort and grow more vigorously than any spring calves of ours ever did. The calf barn has lots of light, lots of clean straw, and wire partitions. With quarters such as these, we are not afraid of the fall calf proposition.—C. P. Ingram, Ohio.

LIVE STOCK SHOWS CANCELLED.

Owing to the presence of foot and mouth disease in a number of states, and to the consequent quarantine, the live stock shows at Chicago and at Kansas City have been called off for this year. See page 12.

SAVE WHEAT AND OAT STRAW FOR CATTLE FEEDING.

It doesn't pay to burn wheat and oats straw, says W. A. Cochel, professor of animal husbandry in the Kansas State Agricultural College. Sufficient feed was wasted and destroyed in the state during the winter and spring of 1913 to have fed all the cattle which were sacrificed on a glutted market.

Instead of wasting feed at the Hays experiment station, as much of it as possible was utilized for maintenance of breeding herds. The result was that while every farmer near the station was forced to over-graze his wheat land and finally to sell his herds, the station maintained its normal of live stock and actually increased the size of the herds and flocks, which were used to consume feed that ordinarily would have been wasted.

It costs \$4.44 a head to keep cattle 100 days in the middle of the winter, using silage valued at \$2.66 a ton, straw 50 cents a ton, and cottonseed cake at \$30 a ton. The ration includes 20 pounds of silage daily, one pound of cottonseed cake daily, and all the wheat straw they could eat. This ration has been tested for three winters at Hays.

It will cost on an average of \$20 says Professor Cochel to produce a beef calf in the short grass section of western Kansas. Figuring pasture at \$7.50 and winter feeding at \$6.66, it costs \$14.16 to keep a breeding cow a year. A beef calf will cost less than \$20. These calves for the last three years have been worth an average of \$35, a profit of \$15 a head.

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The Government this year is asking farmers to put increased acreage into grain. Military service is not compulsory in Canada but there is a great demand for farm labor to replace the many young men who have volunteered for service. The climate is healthful and agreeable, railway facilities excellent, good schools and churches convenient. Write for literature and particulars as to reduced railway rates to Superintendent Immigration, Ottawa, Canada, or to

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CREAM OF THE DAIRY NEWS

THE STANDARD OF A BREEDING DAIRY COW.

When attention is turned to the records of the advanced registers of the different dairy breeds, a measure is discovered which will indicate in part what are the hereditary possibilities of the dairy cow in milk and butterfat production. While to the market milkman the object of these tests might be only to determine the relative profit of the animals in the herd or breed, to the constructive breeder the records have value chiefly as indicating the milking possibilities carried by a certain individual or bloodline. The test, no matter, whether it be for day, week, month or year, has value chiefly as indicating the cow's responsiveness to high-pressure care and her potential ability to transmit high production to her offspring. It is true that some high-testing cows will fail to produce high-testing daughters. It may be just as true that low-testing cows never produce high-yielding daughters. Of course this last statement applies only to cows that have had a favorable opportunity, and not to cows that lack a high record because they have never had a chance.

There is dispute among the different breed advocates as to what standard constitutes the best measure of a cow's ability at milk production. It is obvious that the breeder cannot wait until the cow's life is ended before selecting breeding stock from her, but he must find some indication that will admit of her early use in the breeding herd, if worthy. The record advocated by the majority of dairy students as being dependable is the year's production. In the Advanced Registry of the Holstein-Friesian association the official standard is the week's production. William Gavin in his studies on the indications of production, in correlating the various standards against the yield of a cow's entire life, finds the revised maximum (the best day's record equaled or exceeded three times in the lactation period) the best index of a cow's physiological possibilities.

As a matter of fact, almost any of the accepted standards are good enough indications for selection, if they are properly interpreted. It is possible that the man who studies the subject from the standpoint of the mathematical scientist would require indexes more exact than any now in popular use, but for the man whose cows are only under optimum conditions a part of the time there are far fewer chances of error in the standard than there are in the treatment of the animal, considering each as representing the hereditary possibilities of the animal.

It is pointed out that the cow which is superior to her herdmate in a week's test is occasionally inferior in a year's test. Gavin discovered just as high a per cent of cows in which the one superior for the year's test fell below for the entire life. Popularly the market dairyman feels that a cow forced to a high production is likely to be worn out for regular work, whether her record be for a year, month or week. In fact, he is more apt to look askance at the cow that has suffered under the long grind than at the cow that has passed through a short test. It is wisest to recognize that no one standard is entirely reliable, but any one is reasonably accurate when used as a comparative measure for a number of cows and properly interpreted.

Milk production is largely a question of realizing inherent possibilities, not the transmission of definite entities, such as horns or feet. As in beef production, the possibilities must be developed before they can be appreciated. What the test attempts to do is to record the possibilities of the cow. But in probably more than one-half of the cases the possibilities are

not fully realized, and in a number of cases the records may actually be misleading as to the cow's ability, from a physiological standpoint.

As a rule, the type of test on which the least number of variable or detrimental factors are brought to bear is best. In order to measure the hereditary possibilities in themselves, the highest production in one or more short tests probably most nearly does justice to the cow herself. From the financial standpoint, however, this type of test may prove highly unreliable, as the fact that the cow has to exist in relation to her milker, feeder or owner makes it imperative that the time be long enough for the individual peculiarities of management to be registered on the cow's production. For dairy profit, the factor of man and cow are inseparable. From the breeding viewpoint, the cow's hereditary possibilities only will pass to the next generation. When thinking of the cow's contribution to the good milkers of the future, it is rather unjust to charge personal human deficiencies against her.—Breeder's Gazette.

BOTTLING PASTEURIZED MILK WHILE STILL HOT.

Investigators in the United States Department of Agriculture have found that the process of bottling pasteurized milk still hot has several advantages which make it seem probable that this method would prove both economical and efficacious when practiced on a commercial scale. In an article print-



"Make Friends" Should Be the Password in the Stables and Yards of a Dairy Farm.

ed by permission of the Secretary of Agriculture in the Journal of Infectious Diseases, the authors declare that this method results in bacterial reductions as great as, or even greater than, by pasteurization in bottles.

The principal advantage of the latter method for the ordinary systems in commercial use is the impossibility of the milk becoming contaminated again while being bottled. There is also some saving of milk, because there is no loss from evaporation. On the other hand, when milk is pasteurized in bottles, it is customary to cool the bottles by placing them in cold water. This necessitates the use of absolutely water tight caps, otherwise some of the cold water is likely to find its way into the milk bottles, and even a very slight leak may result in contamination. Waterproof caps are not only expensive, but care is essential to see that they actually are waterproof, and moreover, bottles with chipped or otherwise damaged tops cannot be used, no matter how nearly perfect the cap may be.

Laboratory experiments conducted by the investigators indicate that milk may be pasteurized, bottled hot, capped with ordinary cardboard caps, and cooled by a blast of cold air economically and with very satisfactory bacterial reductions. The air-cooling process requires a somewhat longer time than cooling by water, but in the laboratory it was found that thoroughly pasteurized milk, bottled immedi-



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ately, could be cooled slowly without increasing the bacterial content. Whether or not the experience of the laboratory will be found true in commercial practice remains to be seen. The Department of Agriculture, it is announced, will conduct experiments with a view to determining this important point.

Before the milk is poured into them, the bottles should be steamed for two minutes, the authors are careful to point out. This removes all danger of infecting the milk from the bottles, and is another advantage that this new method possesses.

BUTTERMILK CHEESE.

Buttermilk cheese is a sanitary food product. It has about the same food value, pound for pound, as lean beef steak, which sells at twice the price. Large numbers of city and country residents, to whom the prices of meat, eggs, etc., are objectionably high, find in buttermilk cheese a palatable and economical food.

In addition to ordinary cleanliness in its manufacture, the buttermilk used is heated to a pasteurizing temperature, 140 degrees or higher for an hour, during the cheesemaking process. Such pasteurization is sufficient to kill disease germs such as those producing tuberculosis, typhoid fever, dysentery, etc.

In the household buttermilk cheese is eaten alone or like cottage cheese, mixed with cream, seasoned with salt, mixed with 2 to 5 per cent of Spanish pimiento, paprika, chopped pickles, olives, or nuts, or used in salads. On account of its smooth texture, it can be spread on bread like butter and thus used in sandwiches, either with or without butter. The addition of pimiento or paprika colors the cheese pink.

Bakers prefer buttermilk cheese, on account of its invariable smoothness of texture, for making cheese-cake and other bakery goods, in which they formerly used cottage cheese.

SELLING SOUR CREAM.

Cream in Colorado in all sections except those adjacent to our large cities has thus far been marketed almost wholly in the form of sour cream. As a result a great deal of bad cream is brought in. The producer is either not equipped to give his cream better care or else market prices offer no inducement for him to do so. Delivery to the gathering station is made only once a week which is not often enough, especially during summer months.

These conditions can of course be expected in all new dairy sections, but dairying is becoming well enough established in some sections of the state so that these matters should begin to mend themselves. Wherever the number of cows in the section will warrant it, local creameries can be organized. This does not mean, however, that bad cream can be made into good butter. No butter maker, no matter how expert he may be, can make first class creamery butter out of such cream. Local organizers, as a rule, can and will encourage more frequent delivery, and better care of cream than will the centralizer.

A uniform system of graded cream and paying for it according to quality is much needed. It is the last few

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cents on the price of butter fat that are the profit. The producer will soon improve his product if he sees that he is being paid for the additional trouble. The sooner we get on a sweet cream basis for butter making the better off we will be.—H. E. Dvorachek, Colorado Agricultural College.

The sources of contamination found in milk and which render it impure are dirty cows, utensils, milkers and barns; important in about the order named. Any one of these four may be the source of infection which renders the milk unfit for human consumption.

COLMAN'S RURAL WORLD

A. B. CUTTING, Editor.

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CLEAN QUARTERS AND CLEAN FEED FOR LIVE STOCK.

For the purpose of seeing some high-producing Holstein cows, the writer a few weeks ago visited a certain dairy district in the North. The cows were well worth going a long way to see, but they may be forgotten long before another feature of the visit falls away from the writer's memory. The stables in which the cows were kept furnished object lessons that made the trip exceedingly profitable. Those that were sanitary and equipped with modern conveniences contained the most noted individual cows as well as the best all-round herds—and these stables were in the majority. There were others there, though, that were a disgrace to their owners—and these contained the greatest percentage of poor looking animals and low performers. The managers of a creamery and a cheese factory in the community, on being interviewed, supported this impression by references to the accounts of their patrons. Any person who visited that district, or any one of countless others like it, could not but become firmly convinced that barn and stable sanitation is an important factor in raising high-class stock.

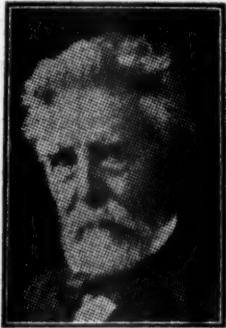
In some of the barns of the poorer type the seed and chaff from the hay scaffolds constantly sifted through cracks and openings to the stable beneath. No such thing as cleanliness was possible when the milking was going on. The walls in some also were loosely constructed and the winds blew dust and dirt here, there and everywhere—into the milk pails and on to the cattle and the men. The stable floors were not cleaned more than once a day, if as often as that in some of them; the cows were given little or no bedding, and appeared dirty and ill-kept. Cobwebs were all over the place and the light and ventilation generally was bad. In one stable there were only two small windows, one at each end, and the doors had to be opened to permit one to see. The hay and other feeds were carried to the cows on forks and in baskets, and some of it was lying around on the floor. Outside of the stable doors there were muck and manure—the accumulation of weeks or months—that must furnish knee-deep wading places in wet weather and be constant sources of disease, both for the cattle and for humans.

The model stables that were seen—and we are considering the two extremes, for the force of the lesson—were tightly boarded with matched lumber on top and sides and were whitewashed twice a year. Cobwebs and dust were kept away by constant sweeping and every chance of dirt of any kind getting into the milk pails was eliminated as far as possible. The manure was removed twice a day and sawdust or clean straw was supplied for the cows to lie upon. The animals looked and were clean all the

Founded by Hon. Norman J. Colman
Published by Colman's Rural World Publishing Co.

Colman's Rural World was established in 1848 by Norman J. Colman, who later became the first United States Secretary of Agriculture. As a clarion of advanced agriculture this journal has attracted nation-wide support, and is today held in highest regard by thousands of intelligent and discriminating readers.

Colman's Rural World strives to bring the greatest good to the greatest number at all times. Each issue is replete with helpfulness and good cheer. It is read for profit and pleasure, and yields a satisfactory return to each individual subscriber. Our advertisers are rewarded with excellent results.



NORMAN J. COLMAN,
First U. S. Secretary of
Agriculture.

time. Good ventilation and lots of windows did their share in maintaining the health of the stock and in keeping out parasites. The hay and other fodder were taken from special feed rooms to the steel stalls of the cattle in feed carriers, and none was lost or left lying around to become musty or contaminated. Outside the stable doors were plank or concrete or gravel approaches, and clean yards. Litter carriers were used to transport the manure from stable to a special shed for the purpose or to a wagon or manure spreader for direct delivery to the field.

These two extreme illustrations show the difference between the unpermissible and the possible. In which class does your stable belong, Mr. Reader? Every stock man will gain by striving to approach the possible as far as his means and conditions will allow. Especially is this true of the dairy farmer. Unless his cows are kept clean and healthy, they are not fit to produce milk for human use—and they cannot produce their best for any use. It is easier to keep a cow clean and healthy than it is to make her right after she has once become dirty and diseased. Sanitary means and methods will do the trick.

PITFALLS FOR THE CITY MAN WHO WANTS TO BE A FARMER.

Many letters are received from people who have read glowing accounts of the wealth that may be made on the farm. A large percentage of these people have already bought farm land. Some of them appear to believe that the reason all farmers are not rich is because of extravagance, wastefulness, ignorance, and a lack of business ability.

As a matter of fact, farmers as a class are intelligent, industrious, and economical, and many of them are men of good business judgment. Furthermore, those who have made a thorough study of the business side of farming know that it is not an easy matter to make money on the farm. Only the most practical and experienced farmers are making any considerable profit out of their business. Most of the money that has been made on the farm in recent years has been made, not by farming, but by the rise of price on farm lands. In the nature of things this rise can not continue indefinitely, and some one will own this land when the price becomes practically stationary or perhaps starts to decline.

While it is true that occasionally a city bred family makes good on the farm, this is the exception and not the rule. It is always a risk to invest in a business without first making a thorough study of that business. Many city people who have saved up a few hundred dollars and who have had little or no farm experience, but who are imbued with a rosy vision of the joys and profits in farming, buy poor land at high prices and thereby lose the savings they have been years in accumulating. One city family paid \$10,000 cash and assumed a \$12,000 mortgage on a farm worth only about \$11,000. Another paid \$2,000 cash and signed a mortgage for \$6,000 on a farm that was later appraised at \$3,000. A city family that had saved \$2,000 used this money to make a first payment on cheap farm land, and when their eyes were opened found they still owed considerably more than the farm was worth. For seven years they have worked almost night and day to meet the interest, without being able to reduce the principal. These instances could be multiplied almost indefinitely.

In purchasing a farm great care should be taken to get a good farm at a fair price. To pay or agree to pay more than the farm is worth is to invite failure. From a business standpoint no farm that does not pay interest on the total investment, depreciation on equipment, and wages for all labor performed on that farm is successful.

Even when great care is taken in making the investment only in exceptional cases should the city bred family attempt farming. Generally the best advice that can be given to the city bred man who desires to become a farmer is that before purchasing a farm he work as a farm hand for two or three years. This will give him an opportunity to learn at first hand many things about the business, as well as the practical side of farming. In no other way, as a rule, can he get good farm training and experience at less trouble and expense or without danger from financial disaster.

There has been a lot of discussion about disinfecting the udder and flanks before milking, but experiments have shown that even this falls short of rendering the cow's product sanitary when she is allowed to lie in filth. Keep the stables clean with a good quantity of bright bedding and the cow will get but little filth on herself.

NOVEMBER						
1914	Sun	Mon	Tues	Wed	Thurs	Fri
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USE LEGUMES ON DEPLETED LANDS OF THE SOUTH.

Because of the low price of cotton, a decrease in cotton acreage and an increase in corn acreage is to be expected in the South. This means that fewer laborers will be needed per acre and if more land is not brought under the plow the drift of the negro population to the cities will be accelerated.

Fortunately there are now in the South vast areas of excellent land ready to be utilized. This is the land that has been depleted of humus and allowed to go back to scrub pines and broomsedge. In many of the southern states, indeed, the forest has actually been encroaching upon the cultivated land. This reforestation is nature's method of recuperation, but a more general use of winter legumes would have rendered it unnecessary. It is safe to say that had the efficiency of winter legumes in restoring humus to depleted land been as thoroughly recognized in the past as it is today, the mistake of permitting reforestation would never have been made. Present conditions, however, by making highly desirable an increase in the total area of tilled land, afford an excellent opportunity for remedying this error. Clearing off of the reforested area will not only relieve the present situation and hold labor on the farms but it will pave the way for a more economic utilization of labor and a greater diversity of crops after the cotton market has returned to its normal condition.

RELATION OF SIZE OF BUSINESS TO THE FARMER'S INCOME.

A careful study by government experts in regard to the profits made by a large number of farmers in different parts of the United States shows that the size of the farm business is one of the most important factors controlling the farmer's income. The problem of how large an investment is needed in order to carry on a certain type of farming to advantage is of the utmost importance. The amount of this investment will vary according to the type of farming and to the region selected.

In a survey of over 100 farms in an irrigated district in Utah only three farm owners with less than \$10,000 total capital received a labor income of more than \$1,000 for their year's work. By labor income in this case is meant what remains of the net income after deducting 6 per cent for invested capital and working capital; in other words, what the farmer himself receives for his year's work and supervision.

In a group of 35 of these men, who had small farms and an average capital of \$5,345, the average labor income was \$235. One out of every five received nothing for his labor and made less than 5 per cent interest on his farm investment. With high-priced land this amount of cap-

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gave him too small an area to utilize to advantage. If land were cheaper, so that a much larger area could be obtained with this same amount of money, then \$10,000 might be a sufficient investment to give the farmer a substantial income.

In the central states, where corn, wheat and oats are the prevailing crops and where land is from \$150 to \$250 an acre, \$10,000 would be entirely too small an investment to yield the owner a good income for the reason that 40 to 50 acres, the total amount of land he could possibly buy with this amount of money, would not utilize his teams, machinery, or labor to the fullest advantage.

On the other hand, the number of acres is not always a true measure, as a big business can be conducted on a small area. Twenty acres of truck and small fruits may equal a 100-acre farm devoted to grain, hay, cattle and hogs. It is the type of farming that determines the number of acres necessary for efficient operation. Many persons have made the mistake of buying too high-priced land for successful general farming. In other words, they paid truck farming prices for land which on account of market relations should be used for only grain and general farming.

The proportion of the total investment that should be used as working capital is equally as important as size of investment. Generally speaking, about 75 per cent to 88 per cent of the farmer's investment is in real estate, the other 12 per cent to 25 per cent being live stock and other equipment. This proportion will vary according to the type of farming followed. In regions where dairying is the main enterprise, the amount of working capital may represent one-fourth of the entire investment.

A third point in the consideration of the farmer's investment is the quality of material in which working capital is invested. This is especially true in regard to live stock. Investigations relating to profits in farming show conclusively that the efficiency of the animals to which the crops are fed is one of the most important factors in determining the farmer's net income. This is to be expected, since on many farms in this country the bulk of the crops is in reality sold to the dairy herd or to meat producing animals. If these are of such poor quality that they yield low returns for their feed the income to the farmer must be correspondingly small. Hence, no matter how large the total investment, if the quality of the equipment is deficient financial failure is inevitable.

A model boulevard, 20 feet wide and more than 400 feet long will be constructed around the arena of the International Amphitheater, Chicago, as a feature of the American Good Roads Congress to be held there on December 14 to 18. The boulevard will be divided into sections, each of which will be built of different materials or by different methods, so that practically every modern standard type of road and street construction will be shown. This feature will constitute a valuable source of information for those who are in search of practical knowledge—especially if sections of country roads are included in the scheme.

Cull potatoes are responsible in large measure for the rapid increase of all potato diseases, and should therefore be removed from the fields at harvest time.

33-PIECE DINNER SET AND 41 EXTRA ARTICLES **FREE**



DESCRIPTION SEND NO MONEY **41 EXTRA GIFTS**

We have given a great many of these dinner sets to readers of our big farm paper. But we are not satisfied—we want to distribute a great many more of these magnificent 33-piece dinner sets—and you can have a set if you only make up your mind to read this announcement. These are not ordinary premium dishes—they are made of pure white ware that will last for years with ordinary care. It only requires a few minutes every now and then, and this magnificent set of dishes belongs to you.

The Complete Set Consists of:

- 6 large plates.
- 6 teacups.
- 6 saucers.
- 6 butter patties.
- 6 fruit or cereal dishes.
- 1 deep vegetable dish.
- 1 large meat platter.
- 1 large cake or bread plate.

Every piece in this large 33-piece dinner set is of high grade material, perfectly white, and large enough to please the most particular housekeeper.

The design on each piece is made to our special order and the red roses with the green foliage is so real that they seem to only lack their natural fragrance. The edge of each piece is finished with solid gold trimmings—the kind that positively won't wear off. Our dishes are prepared by a secret process, the delicate enamel finish on each dish will not graze or get streaky when washed. Indeed, your dishes will be just as white and clear in a year from now as they are the day you receive them, provided you take ordinary care of them.

If you could buy these dishes from your local dealer they would cost you so much money you probably would feel you could not afford them. But they are not for sale—they are made to our exclusive order by the best known pottery in America, the Owen China Company of Minerva, Ohio, and each dish bears the trade-mark of the Owen China Company, thus guaranteeing them to be genuine Owen Chinaware. You will find Owen Chinaware for sale in only the best stores—but our special rose design is made only for our big family of friends and subscribers.



Every woman needs needles, and when your neighbors see this splendid great big needle case, they will want one just like yours. If they like it, tell them that they can have one of these large needle cases if they will hand you 25 cents in connection with a SPECIAL OFFER which I will write you about when you sign the coupon.

I know after you get my complete outfit and see the beautiful colored picture of the dishes you will be more than pleased. You will be surprised, astonished, at the ease with which you can earn this dinner set.

The first thing to do is to send me your name on the coupon and the whole outfit, including needles, colored picture of dishes, full instructions for getting the dishes and 41 beautiful extra gifts, will be sent you by return mail, so you won't have to lose any time in getting started.

The 33-piece dinner set alone will more than repay you for the little favor I ask of you, but we are going to give you a splendid set of 40 beautiful high-class souvenir post cards printed in many colors (no trash) as an extra inducement for you to be prompt. Even though you don't complete your dinner set order the 40 post cards are yours.

But that's not all by any means—we have an extra surprise gift that we will pack with your dishes, and which you will know nothing about until you receive them and open your crate—just like the woman above is doing. This surprise gift is a beauty—something every woman will go into raptures over. I'll tell you more about it when you send me your name.

You take no chances in signing the coupon, because, if you get sick or for any other reason fail to earn the dishes, we will pay you well for what pictures you dispose of.

I also include with each set of dishes my plan for paying the express charges on the dishes. My whole plan is so simple and will take up so little of your time that you can't fail to earn a set of these dishes if you only make up your mind to do so, and sign the coupon below.

Remember, the coupon starts everything—sign it right now—quick.

SEND NO MONEY WITH THIS COUPON

Colman's Rural World,
St. Louis, Mo.

I want to get a 33-piece dinner set and the 41 extra gifts. Send me the sample needle case, picture of the dishes in color, and tell me all about your big offer. It is understood I am placed under no obligation in signing this coupon.

Name

P. O.

R. F. D. State.....

COLMAN'S RURAL WORLD,
Saint Louis, Missouri.

THE HOME CIRCLE AND THE KITCHEN

NOVEMBER.

November's here and chilly is the air,
While many leaves are rustling on
the ground,
And though too cool, there's days
bright and fair
And much to please the soul is surely found.

The clouds are gray, at times a lovely blue
Is mingled in the gold and silver sky.
All goes to cheer the heart and make a view
So charming that 'twill surely please the eye.
St. Louis. ALBERT E. VASSAR.

WINTER DEMONSTRATIONS FOR FARM WOMEN OF THE SOUTH.

The county women agents who during the summer have been teaching southern girls to can their garden products and tend poultry will continue during the winter to make other practical demonstrations in home economics for such farm women as desire them, if the plans materialize which the United States Department of Agriculture hopes to carry out in co-operation with the state colleges. These ladies will have the club members grow winter gardens. It is also proposed to have capable county agents make demonstrations in such lines as the following: Utilizing canned goods in cooking, bread making, use of fireless cookers, preparation of vegetables from winter gardens, homemade step and labor-saving devices, and similar subjects. Thus the Girls' Club work will be carried into the home, and mothers as well as the girls in southern rural communities may become acquainted with the most up-to-date methods of housework.

The various county women agents who have finished canning instruction will endeavor to enroll the women of rural communities where the canning has been undertaken, for a continuance of practical demonstrations in home economics. It will be the object of the county woman agent not only to impart the best she knows but to learn good recipes and methods of work from those who have excelled in any particular line and pass them on for general use in the community. Meetings will be arranged in schools or private homes for the purpose of reporting on the progress of work and for showing results. Social gatherings will be features of the work as they have been for the Girls' Garden and Canning Clubs. Bulletins are now being prepared which will be furnished to workers to aid them in following the instructions of the county agent. Under preparation (though not yet for distribution) are the following: Use of vegetables from winter gardens, how to make and use fireless cookers, preparation of canning club products for the table, some homemade step-saving devices.

Practical demonstration work for the girls of the South has only been carried on actively since 1910, when a few canning clubs were organized. Since then the canning clubs have taken in more than 40,000 girls under the supervision of nearly 400 women agents. The total value of the canned goods of these young women of the South was \$180,420.05 in 1913. Special productions of southern fruits and vegetables have been developed to a considerable extent. Reports thus far received indicate that the records of 1914 will far surpass those of last year. A more recent development, the poultry club, has now 2,090 members.

These young girls have increased materially the supply of wholesome food as well as the income of the farm home by their sales of products. They are now to be taught the actual

preparation of wholesome food in a wholesome and economical manner in the kitchen.

There will also be home demonstration work in cooking meats grown by the boys, many of whom have done so well in raising corn and pigs, as many farm homes supplied with choice home-cured meats prepared by the young club members will testify.

IN SUNNY TENNESSEE.

Home Circle Sisters:—Early in the spring I wrote you and have been too busy since to visit much, but tonight (Nov. 1st) as I sit before the open fireplace, I feel impelled to scribble a few of my thoughts—probably this will adorn the editor's wastepaper basket.

This has been a busy, happy summer on our little mountain farm. The corn is all in the shock, the peas all picked, nearly all the beans housed, the sweet potatoes put away, part of the sorghum made and the fruit canned, dried and sulphured. The wheat is yet to sow, the corn to shred and the butchering to be done; for on the farm we are busy most of the time, yet we find time to visit too, and attend church and Sunday school. Though we work hard, so does the

taking care of that myself—gain health and strength by so doing. Last year I had strawberries from Christmas week until the last week in June continuously—about six months. They were large and delicious and yielded well. Hope they will do as well this year, but as I did not reset, they may not.

Tomatoes and cabbage are being set, and we are going to plant potatoes and to try for the first time a bed of asparagus. Had a thrifty crop of peanuts, so I make my own peanut candy now.

Have a row of handsome zinnias, which the butterflies visit every day; and some wild bushes with small white blossoms are full of honey bees. Can pick bouquets of wild flowers here in Ruskin, the most of the year.

My wild persimmon trees and other people's Japanese persimmons—large, luscious, beautiful fruit—were visited by the trimmers, who cut off branch after branch, actually killing some of the smaller trees. Grey bugs half an inch long do the work. They lay their eggs in the branch cut off, and the way to dispose of them is to find the bugs when you can, and burn the cut off branches.

The editor says that we must not talk about war, but may we not talk about peace? I am much interested in



A Floral Effect Like This Can Be Had Almost Anywhere. Look at Your own Veranda and Plan Now to Have it Next Year the Prettiest in the Neighborhood.

city dweller, and we are not half so scared of winter as he is, for we have a stock of eatables laid in.

Our home is at the base of Chimney Top Mountain, in the picturesque portion of East Tennessee, where the people are famed for their hospitality.

To Mrs. Mardis I want to say that my sweet clover did fine.

Thanksgiving will soon be here, then soon 'twill be Christmas. I wish you all a happy winter. Write to the page oftener now that the busy days are over, sisters.—Joe's Wife, Tennessee.

[Note.—There is no danger of your letters going into the wastepaper basket, Joe's Wife. Come again, and often. And all the sisters and mothers and daughters, to say nothing of the precious sweethearts, in the Rural World family, should accept Joe's Wife's invitation to write often during the fall and winter months. Joe's Wife's letter makes me, for one, feel almost like going to Tennessee to enjoy some of that hospitality.—Editor.]

NOTES FROM FLORIDA.

Editor, Rural World:—It has been a long time since I have told the Home Circle readers about my Florida garden; and now it is no longer quite so much mine, as some one else is putting it in. We have Lima beans and Kentucky Wonders growing like weeds, and Stratagem and Telephone peas up and doing. Celery is planted, and sweet potatoes soon will be ready to dig; and the roselle about ready to blossom. Roselle is the Florida cranberry, though only like it in color and taste—some people make tea of the leaves. Beets and okra seem slow to come up. The garden was mostly planted in the last half of October.

I have a fine strawberry bed and am

the World's Peace Army, with headquarters at St. Louis. Have sent in over 160 names from Ruskin, and we have received our pledge cards and will meet for organization, November 15 at Ruskin school house. We expect to hold monthly meetings and discuss methods of bringing about world-wide peace. We will have a program, including music, recitations, discussions, readings from literature sent out by the Army.

For November 15, we have a symposium—all home talent: "World Peace—How to Bring It About!" Four speakers are allowed ten minutes each; then seven women lead the discussion, three minutes each; then the discussion is open to all. Such a program could be carried out in every school house in the land. It seems to me that education for world-wide peace is the only thing that can save civilization from destruction.

Write to the president, World's Peace Army, University City, St. Louis, Mo., asking for literature, and start a Peace Society in your own neighborhood. I believe it is "worth while." I believe it is the most worth while of anything we can do. Or write to me, and I will see that it is sent to you. Yours for World-Peace.—Harriet E. Orcutt, Ruskin, Fla.

WOMEN AS FARMERS.

In nearly every instance where women have undertaken to manage farms they have been remarkably successful, the Woman's National Weekly states. The farm women look more after details than men, and they are more economical and painstaking. Miss Pearle Mitchell has a farm of 320 acres in Missouri, which she superintends. She realizes that there is much hard work on the farm. At the same time she finds the rewards

A GOOD COMPLEXION MEANS PURE BLOOD

Everybody that wants a fine, glowing, youthful skin, should take old reliable Hood's Sarsaparilla, a physician's prescription, which gives a clear, healthy color. When your blood is made pure, pimples, boils, hives, eczema disappear. Langor, loss of appetite, tired feeling, weakness are symptoms of impure, unhealthy blood.

Hood's Sarsaparilla purifies the blood. Get a bottle today.

Big Sleeping Doll FREE



This fine sleeping doll is nearly two feet tall, and is all the rage. She has slippers, complete underwear, stockings, etc. Dress is very prettily made, half length, and trimmed with lace; also has a little chateleine watch, with fleur-de-lis pin. You can dress and undress this doll just like a real baby. Has curly hair, pretty eyes, and goes to sleep just as natural as life when you lay her down.

This doll free for selling only 25¢ each. Religious pictures at 10 cents each. We trust you with pictures until sold, and give an extra surprise gift for promptness. Send no money—just your name.

PEOPLE'S SUPPLY CO., Dept. R. W., St. Louis, Mo.

larger than in city employment. Miss Mitchell believes in corn and hog, and as evidence of this faith she wears a large diamond ring purchased with the price of one hog. However, women who essay to farm must not take it up as a fad, but as a business. Then they will become successful agriculturists. There are many inviting opportunities on the farm open to women. They can grow small fruits and raise poultry, and they can cultivate seed tracts. There is always a market for medicinal plants and women can grow them profitably on small tracts. There could be no more independent calling than that of the small farmer. Women are well adapted to the work, and those engaged in it would not exchange for any other vocation. Health alone is one great consideration.

BAKED CHICKEN.

Prepare chicken as for frying and put both lard and butter in the bottom of a casserole. Sprinkle each layer of chicken thickly with flour, season with salt and pepper and add water to cover it. Cook in the oven for several hours. You can add pared sweet potatoes and potatoes and make a full dinner. An enameled pan with a cover makes a pretty good casserole, if you do not have the manufactured kind. Any kind of meat is good when cooked in the same way.

SLIMY BREAD.

Trouble is sometimes experienced both in the home and in the bakery with what is known as sticky or slimy bread. This is characterized by the interior of the loaf developing a doughy consistency when the bread is a day or so old, suggestive of insufficient baking. This condition is due to the presence of a germ, bacillus mesentericus, or the common potato bacillus, which occurs in large numbers in the soil from which it finds its way readily to the skin and eyes of potatoes and to the heads of growing wheat. If potatoes are used in the bread, care must be taken to remove the eyes to a considerable depth since the germs referred to produce very resistant spores which are not killed by the temperature reached by the inside of the loaf. Frequently the flour becomes infected and it is not uncommon to find the organism in the yeast cakes themselves.—Walter G. Sackett, Colorado.

A teaspoonful of grated horseradish will keep a can of milk fresh for a day or two even in the hottest weather.

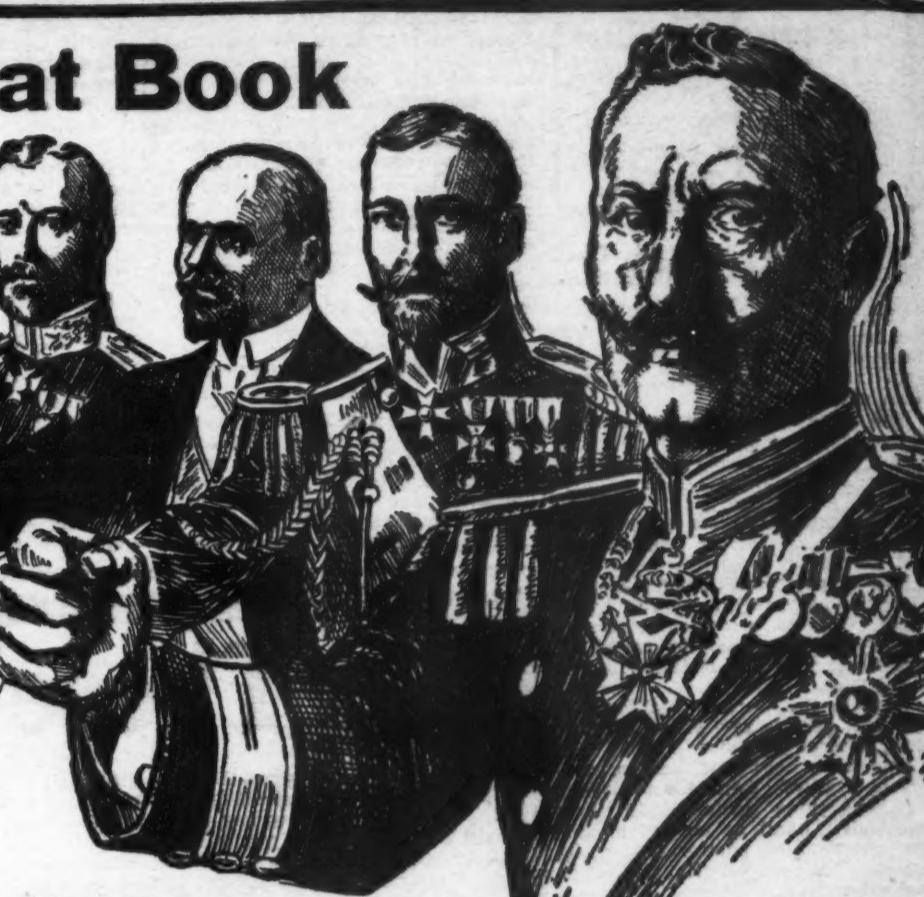
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"Europe At War" is written by Judge Henry Neil, who has written many important histories under the name of "Marshall Everett." Judge Neil put through the Mothers' Pension Law in nineteen States. Judge Neil has a wonderful faculty of telling the story of the causes of this war and introduces startling stories of personal experiences. For instance: Did you know that Emperor William never uses a knife when he dines? Did you know that in 1870, the beginning of the Franco-Prussian War, General Von Moltke, sick in bed, mobilized the German army by messenger? Did you know Lord Kitchener was born in Ireland and why he has been selected to be the head of the War Department? These merely suggest some of the intensely interesting anecdotes in this fascinating story.

Look over the table of contents given on this page. That gives you some idea of the scope of this book. It is a book that you cannot afford to get along without at the present time. Everyone reads the war news and talks about it. By reading this book you will inform yourself and get innumerable points clear in your mind as to why all of Europe is seething with war. You will understand the final settlements of peace.

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NOTICE OF NEUTRALITY

"Europe At War" is absolutely neutral. It favors no one side. It draws no conclusions as to the present conflict. It is written from the view point of an unbiased historian. It gives the facts—the history of previous events and shows their relation to what has happened within the last thirty days. Get it for yourself—get it for your boys—get it for the whole family. This great war affects everybody and this great book gives you the rock-bottom facts. After you read it you will appreciate why we under the Stars and Stripes Can and Will Remain Neutral.

This coupon and \$2.00 (which includes postage and packing) brings this book to you and credits your subscription to Colman's Rural World three years. This offer is open to new or old subscribers. "Europe At War" should be in every home and every library.

Poultry Raising FOR Fun & Profit

FACTS ABOUT POULTRY THAT WILL INTEREST THE BEGINNER.

There are many points in poultry raising that puzzle beginners. For those who are interested I shall give some information in the form of questions and answers:

How much house room is needed for 25 fowls? 150 square feet.

How large should the runs or yards be for 25 fowls? 20x50 or 16x150 feet.

How much roost room is needed for 25 fowls? 12 feet for Leghorns, 16 feet for larger breeds.

How many females should be mated with one male to ensure fertile eggs? 10 to 15, according to size.

How long after they are mated before the eggs become fertile? 10 days at the least.

What is the average cost for food per hen per year? From \$1.00 to \$1.50, according to size.

How many eggs should a hen average in a year? From 150 to 200.

I hope these pointers will help somebody. Shall be pleased to answer questions on poultry raising, including diseases.—J. E. Ledbetter, Ledbetter, Ky.

IS THERE AN EGG TYPE OF HEN?

This question was briefly answered by Tom Barron, of Catford, England, in a recent issue of Modern Farming. Mr. Barron is perhaps as well or better known in the poultry world than is any other breeder. This publicity has been gained through his birds which have been entered in all of the principal egg-laying contests all over the world, and without exception have proved to be winners.

During his brief visit to the United States, Mr. Barron gave a few notes concerning the characteristics of an egg-type of hen, he saying:

"An egg-laying strain cannot be produced by inbreeding. In order for a hen to be a good producer, she must be in good health and full of vigor." In his own case he has not bred from a male for years which was not bred from hens which laid 200 eggs or over, and he recommends that method. He does not try to overdo the thing and has not bred for the 300 egg hen and over. His best record was 283 eggs in one year. He breeds for high averages instead of exceptionally high individuals, and this has been true with both pens which he has had in United States egg-laying contests.

"A good layer usually stands high in front, and her back is not on a level or the rear higher than the front. The best producers usually have large combs, a high tail, and a prominent, large, bright eye." Upon handling the birds, he finds that most of the layers have thin, straight, pelvic bones; that there is quite a difference between the points of the pelvic bones and the points of the breast bone. This indicates capacity and lots of room for the egg and digestive organs. He likes the wedge shape, rather narrow in front, but wide behind and between the legs."

Mr. Barron agrees that the males must be from high laying hens. He also advises looking well to the females and using hens which have shown they are able to make good records. A hen that will not lay well in winter months is discarded by him, for a hen that doesn't lay well in winter will not make a good record, as a rule, and he wishes to breed hens that lay eggs when eggs are highest in price. He used two males in his breeding pens, alternating them every five days. The males are full brothers as a rule. He gets better fertility, stronger chicks, and better hatches, he thinks. Broodiness will ruin the egg record of any hen. We must breed to eliminate that from our flocks as much as possible.

There is a blocky, beef type in every

variety which does not lay. He advises not to trap nest the entire flock, but trap nest at least a few of the most promising ones. Keep accurate records, pedigree the chicks, and results are sure to follow. There must be regularity in feeding. He believes we should feed more moistened mash-es, and also believes in some cases that it pays to soak the grain. A hen, in order to make a good record, must produce quite a large number of her eggs in winter months. His experience has been that the first pullets of a brood to begin laying make the best layers, and the first cockerels to crow usually make the best breeders for egg production.

MALE AND FEMALE GUINEAS.

A lady reader in Montana wants to know how to tell a male guinea from a female. It is difficult even for the practiced eye to tell them apart, as the cocks and hens resemble each other very closely. The head of the cock is frequently a little thicker,

with wattles double the size of the hen. The hen cries out her song, "buckwheat," while the cock has an entirely different call. Raisers of guinea fowls who can give other means of distinguishing between cocks and hens are asked to send same for publication.

Let the farmer who is a failure, look up his own sleeve for the cause, and not at the soil, stock or seasons.

MISSOURI POULTRY SHOW.

Big "doings" in poultrydom are planned for the week of Nov. 24 to 29 in St. Louis, when the Missouri State Poultry Show will be held. The premium list offers exceptionally large general and special prizes for pure bred fowls, bantams, turkeys, ducks, geese, and for eggs and dressed poultry. A very large entry in all departments is expected. Every day during the week lectures will be given on every conceivable subject connected with the industry, and a

big banquet will be held Friday night. For a copy of the premium list write to Fred Crosby, secretary, Mountain Grove, Mo.

AN ENGLISH AUTHOR WROTE:

"No shade, no shine, no fruit, no flowers, no leaves.—November!" Many Americans would add no freedom from catarrh, which is so aggravated during this month that it becomes constantly troublesome. There is abundant proof that catarrh is a constitutional disease. It is related to scrofula and consumption, being one of the wasting diseases. Hood's Sarsaparilla has shown that what is capable of eradicating scrofula, completely cures catarrh, and taken in time prevents consumption. We cannot see how any sufferer can put off taking this medicine, in view of the widely published record of its radical and permanent cures. It is undoubtedly America's Greatest Medicine for America's Great Disease—Catarrh.

Get These Three Dolls

In every home where there are little girls or boys there should be plenty of dolls to make the little folks happy—and I will make it easy for you to get them.

Every little girl or boy will love Anna Belle and her two baby dolls. The illustrations on this page do not begin to show to you what these dolls really are. This is by far the prettiest family of dolls we have ever offered our readers. We have sent thousands of dollies to girls and boys, but Anna Belle is different and prettier than all others. Anna Belle is bigger than a baby—over two feet high—baby clothes will fit her and you can bend her legs and arms without fear of breaking them. She can sit up in a chair or sleep in baby's own bed. Any little girl or boy would be proud to have Anna Belle as a playmate. The two smaller dollies are "Buster" and "Betsy"—Buster is a husky boy doll with a red striped sweater; "Betsy" is a little beauty and very lovable in her bright red coat. Both the little dollies are fully dressed.

The Best Playmates

Any child will be greatly amused with this doll family and will play all day with Anna Belle, Buster and Betsy. They are practically unbreakable and will stand hard usage for years. These dollies are better for the little folks than bisque or china dolls, because they won't break, soil their pretty hair or lose their eyes, and are so inexpensive every girl or boy reader can afford to own them.

Parents

Every little girl wants a big doll. Little boys also. Think of the innocent happiness and pleasure your child would derive from owning these three dolls. Then satisfy the craving for something to love and something to play with by sending for this outfit.

Lots of Fun

to be had with these three dolls. The little girl or toddling boy who owns these dolls will just be the happiest little tyke to be found for miles around. The big little girl who owns Annabell can dress her in her own clothes and have the loveliest time! Then the baby dollies—to cut and sew for—what could be more instructive and entertaining?



**Bigger
Than
a
Baby**



SPECIAL 30-DAY OFFER

People's Supply Co., St. Louis, Mo.

Enclosed is 15 cents (stamps or coin) for which send me one set of dolls as advertised.

Name

P. O. State

Don't Miss This Opportunity

Every little girl or boy wants a big doll—here's an opportunity to get three dollies instead of one. Just think what fun it would be to have a doll family in your home. Think of the joy and happiness of the little ones when they get this delightful set of three dollies.

Special 30-Day Offer

To introduce this big collection of dolls we will send one complete set (3 dolls) to you if you will sign the coupon below, and return it to us at once with 15 cents. If you are not entirely satisfied when you get the dolls we will return your money. Most dolls are imported and there is going to be a great scarcity this year, so we advise you to order early.



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IN THE ORCHARD AND THE GARDEN

MORE ABOUT PLANTING OF BULBS IN THE LATE FALL.

Tulip bulbs that are expected to brighten the lawn in the early spring must be planted in the late fall after heavy frosts or light freezes have checked vegetation. These plants are adapted to out-of-door culture in all parts of the United States where the weather is cold enough to freeze the soil for a few weeks in the winter and they should be planted about a month before the ground is liable to freeze up. Other "Holland bulbs," such as the hyacinth and narcissus, should be planted at the same time as the tulip.

Tulips are most appropriately planted among shrubbery where they may be naturalized or where they may remain permanently. In general, however, they are used to advantage in formal beds or in borders on the lawn.

The best soil for the tulip is a light loamy soil. The soil should be well drained and sand is better than clay. In clay soils it is desirable to set the bulbs on a layer of sand, to insure drainage, while in very heavy soils the sand should completely surround them. They do best in a rich soil but manure should not come in contact with the bulbs. It is best applied to a previous crop. When fertilization is necessary at the time of planting, well-rotted manure compost should be used. The soil should be in excellent condition.

Tulips should be set four inches deep while hyacinths and narcissi should be set six inches, in all cases measuring to the bottom of the bulbs. Care should be taken to have the bulbs of any variety of a uniform size and to set them at a uniform depth as this depends uniformly in time of blooming.

As soon as the surface of the ground freezes to a depth of two or three inches the bed should be covered with coarse manure to prevent alternate freezing and thawing and also to prevent freezing below the bottom of the bulbs and so prevent the formation of roots during the winter. As soon as freezing weather is over in the spring the mulch should be removed, at least the coarser part of it.

NOW IS BEST TIME TO FERTILIZE THE LAWN.

To stimulate the growth of a lawn and to improve its appearance for the following spring, no better treatment can be recommended than the application of properly rotted manure in the late fall. This application should not be made until after the frosts have stopped the growth of the grass. Ten to 20 two-horse loads should be applied to the acre, according as the soil is more or less rich.

It is most important that the manure should be thoroughly rotted before application so that all weed seeds are killed; otherwise damage done by weeds will more than offset the fertilizing value of the application.

Manure really needs careful handling before it is suited for spreading over the lawn. Unless it is properly "composted" it may have most of its valuable constituents destroyed by improper handling. To "compost" manure properly it should be treated as follows:

Pile all manure in heaps with alternate layers of sod or other litter. Keep it wet enough so it will not burn. Let it stand a whole year through summer and winter, fork it over two or three times during the year. It will then be ready for use on the lawns and danger from weed seeds will be minimized.

Ground bone meal and wood ashes: Many people object to the use of manure at all, not only because of the danger from weed seeds, but because of its unsightly and insanitary appearance. These will undoubtedly

prefer to use something else, and the most economical substitute is finely ground bone or bone meal. This should be applied at the rate of from 500 pounds to one ton per acre, according as the ground is more or less rich. It should cost between \$25 and \$30 a ton.

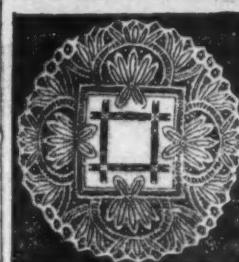
With the bone meal it is desirable to use double the quantity of wood ashes. These ashes contain considerable lime in a very desirable form, as well as other valuable elements. However, they are apt to be more or less costly.

Ordinarily muriate of potash would be found more economical than wood ashes, although the potash does not contain the lime which the other fertilizer imparts to the soil. On account of the European war, the potash may prove more difficult to obtain than the wood ashes. Only one-tenth the quantity of potash should be used as of bone meal.

The potash may be sown separately or mixed with the bone meal as desired. The same is true of wood ashes if these are used instead of potash. All applications should be made before the ground freezes permanently for the winter as otherwise the fertilizer may be largely washed from the soil before it has a chance to become incorporated with it.

In regions where cottonseed meal may be obtained at a price not over \$25 per ton, it may be used satisfactorily in the place of the ground bone. Tankage and fish scraps are even richer in important elements than ground bone but are frequently in bad mechanical condition for handling (that is, they contain hair or other foreign coarse matter). Their bad odor also makes them objectionable.

Prepared sheep manure is an excellent dressing. As it has been sterilized by drying and rendered odorless, there are not the objections

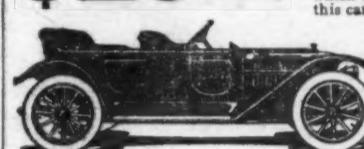


Nottingham Table Cover and This Floral Novelty GIVEN FREE To All READERS



We want to send these two splendid gifts to every reader of this magazine. This handsome table cover is made in the latest style, of elegant material, all ready to spread on your table. It is a very beautiful design as shown in the illustration, and is sure to please any woman. The plant we give you is the rare and sacred Resurrection Plant and will stay green by placing them in water. When taken out of water they dry and curl up and go to sleep. They will keep in this state for years. Simply place the whole plant into water, it will open up and start to grow in 20 minutes. We will enter the Nottingham Table Cover and the sacred plant free and postpaid to anyone sending us \$1.00 to pay for a subscription to our fine big home magazine. Only one to a family on this liberal introductory plan. Send us today. T. E. Seymour, Mgr., 348, Springfield, Ohio.

\$25.00 Cash for a Slogan



Here is a picture of the \$1250 Regal Underlung Automobile which we are going to give away, but first we want a slogan for this car. The Packard slogan is "Ask the man who owns one."

The slogan for the Jackson is "No hill too steep, no sand too deep." You are familiar with other slogans and can no doubt think up a good one for this well known Model H, \$1250 Regal Automobile.

You Can Win the Auto and \$25.00 too

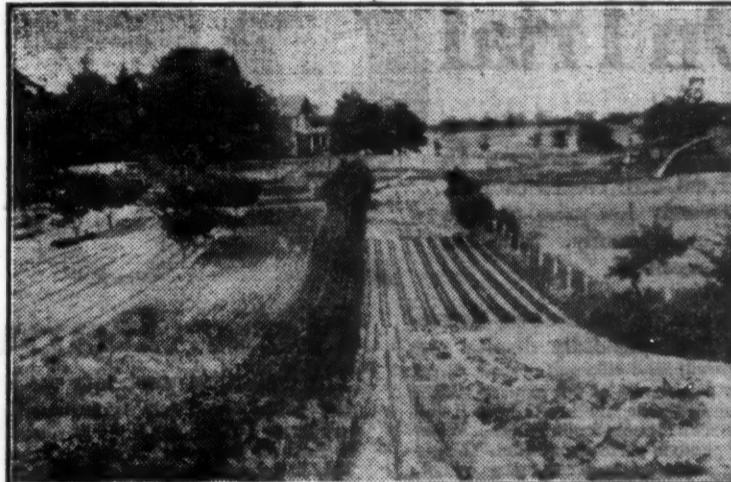
Think up the best slogan you can and send it in with your name and address, and we will tell you all about the contest in which this fine \$1250 Automobile is given. You stand a chance to win the \$25.00 cash prize too as in as two or more persons send the slogan selected \$25 will be paid to each. Be sure and send your name and address so I can tell you about the contest. The \$1250 Regal is sent, all charges paid, to the winner. Write me today. A post card will do. Only one slogan accepted from each family.

C. P. BRANN, Auto Editor, 228 Center Street, Des Moines, Iowa.

ists in more ideal surroundings.

4. Pot the plants in pots no larger than necessary to accommodate them. Use good soil with sand enough to keep from puddling. Some leaf mold and manure mixed with it is also advisable.

5. Cut back the tops of the plants from one-half to two-thirds. This is important. While this operation must be done at the sacrifice of the flowers, it is necessary for the life of the plant.



Set Among Trees and Surrounded by Crops Galore, this Market Gardener's Home has an Air of Peace and Plenty.

to it that there might be to ordinary manure. Its one drawback is expensiveness.

To protect worn places—If there are any parts of the lawn which will be trampled over when they are not frozen, and especially when snow is melting there, these parts should be protected to prevent persons from cutting across. Trampling on the turf when it is covered by slush or snow is as destructive to a lawn as almost anything else.

WINDOW GARDENING.

With the beginning of cold weather, a great many people will want to take in the flowers they have kept out of doors all summer, put them in pots and keep them through the winter. In order to do this successfully it will be necessary to observe a few important points:

1. A bay window with a southern aspect is desirable. If a bay window is not accessible, choose an ordinary window facing the south as sunlight is necessary to the health of the plants.

2. The temperature of the room in which the plants are growing should not fall below 50 degrees F. at night nor go above 75 or 80 degrees in the day time.

3. Select the healthiest plants obtainable, as sickly ones are difficult to bring into condition, even by flor-

With the disturbed condition of its root system, the plant cannot be expected to maintain a large top, flowers and all, in full vigor. When the top is cut back, the plant is stimulated to send out new shoots. By the time these begin to grow the roots have become established in the pots and the plant remains healthy.

6. Water the plants thoroughly, but do not keep the pots in saucers filled with water. The saucers are good to keep the water from running through to the floor, but that is all. Apply water until it begins to run through and then stop. Do not water again until the plant needs it. Plants with their tops cut back require less water than those with a large, full top. Remember that flowers can be killed by giving too much water as easily as by not giving enough.

7. When the plants are infested with plant lice, they should be dipped in tobacco water to eliminate the trouble.

The following plants are the ones most easily and satisfactorily managed in the window garden:

Callas, cyclamens, chrysanthemums, coleus, begonias, primrose, fuchsias, geraniums, camellias, azaleas, and hyacinths and other bulbs.

The control of weeds, like the control of a contagious disease, is only secured at the price of eternal vigilance.



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We send this complete outfit free to any boy or girl who will sell 25 boxes of Art Pictures. Solids Pictures at 10 cents each. We trust you with pictures, and take back all you cannot sell. Send your name today. A postal will do.

Address, PEOPLE'S SUPPLY CO., (Dept. R. W., St. Louis, Mo.)

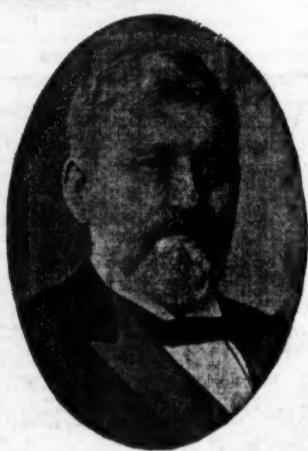
HOUSE PLANTS IN WINTER.

The care of house plants in winter is never a burden if rightly undertaken, but the housewife should first make up her mind to be systematic. Plants watered three times a day for the first week and once in three weeks later in the season will never prove a delight. Coleus, begonias, and similar varieties should be watered daily except during extreme cold weather. Once in two or three days is often enough to water palms, geraniums, roses, etc.

Begonias, fuchsias, ice plant, etc., do well in the back of the window farthest from the light, while roses and coleus need all the sunshine possible. Instead of spraying the leaves for insects, powdering the soil, etc., try putting a tall stand in the center of the room and setting the plants under it once in three or four weeks. In the center of the circle of plants set a deep vessel, put in a little twist of paper, sprinkle it with tobacco leaves and apply a match. When the tobacco begins to burn, be careful not to have too much of it, throw an old quilt over the top of the stand, thus confining the smoke. The result will be death to all animal life on stalks or leaves without injury to the plant.

Many remedies have been given for the small white worm that infests the earth about plants, but my experience has been that all will fail. The surest plan is to fill a baking dish or old basin with fresh earth from the supply which every plant lover places in the cellar in the autumn for the filling of pots for new plants. When filled set it in the oven and bake for at least six hours, remove and set out of doors until thoroughly cool. Take the plants from the pots, shake every particle of earth from the roots and set them in a basin of water to which has been added three or four drops of carbolic acid.

Repot the plant, throw away the old soil and be sure that you will have no more trouble with the white worms.



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Address _____

Put "X" after
Style Wanted
Crayon
Pastel

Send the Coupon

Act quick to get the benefit of this special limited offer. We refer you to the National Bank of the Republic, Chicago. Your own banker can find out how responsible we are. You run no risk. You pay us nothing unless you are entirely satisfied. Send the coupon or a letter with your small picture today. DO IT NOW.

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